

**In the Claims:**

Please amend the claims as indicated.

1. (Currently amended) An apparatus for utilizing tape storage media segmentation to improve data access performance, the apparatus comprising:  
a tape storage medium configured to store data;  
a segmentation module configured to access a first segment and a second segment on the tape storage medium; ~~and~~  
a selection module configured to allow a user to select a user-defined capacity of the tape storage medium that is less than a usable capacity of the tape storage medium[[]]; and  
an identification module configured to identify a tape storage medium as full when a substantial portion of the user-defined capacity of the tape storage medium has been used to store the data.
2. (Original) The apparatus of claim 1, wherein the selection module is further configured to allow the user to select a user-defined capacity that is substantially equivalent to the capacity of the first segment of the tape storage medium.
3. (Original) The apparatus of claim 1, wherein the selection module is further configured to allow the user to select a user-defined capacity that is greater than the capacity of the first segment of the tape storage medium.

4. (Original) The apparatus of claim 1, wherein the selection module is further configured to allow the user to select the user-defined capacity of the tape storage medium before the data has been stored on the tape storage medium.
5. The apparatus of claim 1, wherein the selection module is further configured to allow the user to select the user-defined capacity of the tape storage medium after the data has been stored on the tape storage medium.
6. (Original) The apparatus of claim 1, further comprising a mapping module configured to associate the user-defined capacity with a tape storage device on which the tape storage medium is provided.
7. (Original) The apparatus of claim 1, further comprising a write module that is configured to write data to the tape storage medium within the user-defined capacity.
8. (Canceled)
9. (Original) A system for utilizing tape storage media segmentation to improve data access performance, the system comprising:
  - a tape storage device having a tape storage medium that is configured to store data, the tape storage medium having a first segment and a second segment;
  - a host that is configured to communicate with the tape storage device;
  - a segmentation module configured to access a first segment and a second segment on the tape storage medium;

a selection module that is configured to allow a user to select a user-defined capacity of the tape storage medium that is less than a usable capacity of the tape storage medium;

a mapping module configured to associate the user-defined capacity of the tape storage medium with the tape storage device;

a write module that is configured to write data to the tape storage medium within the user-defined capacity;

an identification module that is configured to identify a tape storage device as full when a substantial portion of the user-defined capacity of the storage medium is used to store the data; and

a read module that is configured to read data from the tape storage medium.

10. (Original) The system of claim 9, wherein the segmentation module is further configured to use the tape storage medium according to a segmentation layout.
11. (Original) The system of claim 10, wherein the segmentation layout defines a plurality of segments on the tape storage medium, each segment having a user-defined size.
12. (Currently amended) A process for utilizing tape storage media segmentation to improve data access performance, the process comprising:  
providing a tape storage device having a tape storage medium;

accessing at least one of a first segment and a second segment on the tape storage medium; and

allowing a user to select a user-defined capacity of the tape storage medium that is less than a usable capacity of the tape storage medium[[]]; and

identifying a tape storage device as full when a substantial portion of the user-defined capacity of the tape storage medium is used to store the data.

13. (Original) The process of claim 12, wherein allowing a user to select a user-defined capacity further comprises allowing the user to select a user-defined capacity that is substantially equivalent to the capacity of the first segment of the tape storage medium.
14. (Original) The process of claim 12, wherein allowing a user to select a user-defined capacity further comprises allowing the user to select a user-defined capacity that is greater than the capacity of the first segment of the tape storage medium.
15. (Original) The process of claim 12, wherein allowing a user to select a user-defined capacity further comprises allowing the user to select the user-defined capacity of the tape storage medium before the data has been stored on the tape storage medium.
16. (Original) The process of claim 12, wherein allowing a user to select a user-defined capacity further comprises allowing the user to select the user-defined

capacity of the tape storage medium after the data has been stored on the tape storage medium.

17. (Original) The process of claim 12, further comprising associating the user-defined capacity of the tape storage medium with the tape storage device.
18. (Original) The process of claim 12, further comprising writing data to the tape storage medium within the user-defined capacity.
19. (Canceled)
20. (Original) A computer readable storage medium comprising computer readable code configured to carry out the process for utilizing tape storage media segmentation to improve data access performance of claim 12.
21. (New) The apparatus of claim 1, wherein the first segment and the second segment are configured with different storage capacities.
22. (New) The apparatus of claim 1, wherein the segmentation module is further configured to divide the tape storage medium into the first segment and the second segment, wherein the capacity of the first segment is substantially equivalent to the user-defined capacity.